

inorganic filler 6f is applied onto the first layer and dried as the second layer (sometimes omitted). The third layer in which the amount of the inorganic filler is smaller than that of the second layer is applied onto the second layer. By drying this, there can be formed an anisotropic conductive film sheet body of a three-layer structure in which the first layer, the second layer, and the third layer are formed on the base film. By cutting the anisotropic conductive film sheet body every specified dimension, there is an anisotropic conductive film sheet 10 as shown in Fig. 28C, Fig. 29C and Fig. 32A.

According to the method for forming the anisotropic conductive layer directly on the circuit board 4, on a side of manufacturing the electronic component unit, the resin material most appropriate for the electronic component is selected and arranged on the electronic component side of the anisotropic conductive layer, while the resin material most appropriate for the board can be selected and arranged on the board side, so that the degree of freedom of selecting the resin can be improved.

In contrast to this, according to the method of manufacturing the anisotropic conductive film sheet body, a lot of the anisotropic conductive film sheets 10 can be collectively manufactured although the degree of freedom of selection is less than the above-mentioned case. This

leads to a satisfactory manufacturing efficiency and an inexpensive cost and needs only one sticking device.

As described above, according to the
aforementioned embodiments of the present invention, many
5 processes that have conventionally been needed for bonding
the electronic component of, for example, an IC chip to the
circuit board can be eliminated, and the productivity can
be remarkably improved. That is, in the case of, for
example, the stud bump bonding and the solder bump bonding
10 described as prior art examples, it is required to inject
an encapsulating material after flip chip bonding and put
the board in a batch type furnace to perform hardening. A
time of several minutes per unit is required for the
injection of the encapsulating material, and a time of two
15 to five hours are required for the hardening of the
encapsulating material. The stud bump bonding mounting
further needs a process for transferring an Ag paste to the
bump as pre-processing, mounting this on a board and
thereafter hardening the Ag paste. Two hours are required
20 for this process. In contrast to this, according to the
methods of the aforementioned embodiments, the
encapsulating process can be eliminated, allowing the
productivity to be remarkably improved. Furthermore,
according to the aforementioned embodiment, employing the
25 solid or semi-solid insulating resin encapsulating sheet

etc. allows the employment of, for example, epoxy resin of a great molecular weight, allows the achievement of bonding in a short time of about 10 to 20 seconds, allows the reduction in bonding time and allows the productivity to be further improved. Furthermore, the following effects can also be produced.

(1) Bump formation

According to the method of forming a bump with plating (third prior art), a special bump forming process is required to be performed by the semiconductor manufacturer, and therefore, the bump formation can be formed only by the limited manufacturers. However, according to the aforementioned embodiments of the present invention, IC chips for general-purpose wire bonding can be employed by means of a wire bonding device, and IC chips can easily be obtained. The reason why the IC chips for general-purpose wire bonding can be employed is that bumps can be formed on an ordinary IC pad on which Al pads are formed by means of a wire bonding device or a bump bonding apparatus so long as the IC chips are for wire bonding use. On the other hand, in order to form a plating bump by the method of forming a bump with plating (third prior art), there are the processes of forming a barrier metal of Ti, Cu, Cr, or the like on an Al pad, applying a resist by spin coating, and forming a hole by exposure only in the bump